



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

elc

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/070,910	03/13/2002	Florence L'Alloret	220757USOPCT	2997

22850 7590 09/20/2005

OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.  
1940 DUKE STREET  
ALEXANDRIA, VA 22314

EXAMINER

FUBARA, BLESSING M

ART UNIT PAPER NUMBER

1618

DATE MAILED: 09/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/070,910	Applicant(s) L'ALLORET, FLORENCE	
	Examiner Blessing M. Fubara	Art Unit 1618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 28 June 2005.  
 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.  
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☐ Claim(s) 26-53 is/are pending in the application.  
 4a) Of the above claim(s) 29,31 and 42-45 is/are withdrawn from consideration.  
 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
 6) ☒ Claim(s) 26-28,30,32-41 and 46-53 is/are rejected.  
 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) ☐ All b) ☐ Some \* c) ☐ None of:  
 1. ☐ Certified copies of the priority documents have been received.  
 2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

Art Unit: 1618

### DETAILED ACTION

Examiner acknowledges receipt of notice of appeal filed 04/28/05 and Appeal Brief filed 06/28/05. Claims 26-53 are pending. Claims 29, 31 and 42-45 are withdrawn from consideration.

Upon further review and consideration, the finality of the last office action is withdrawn and the rejection below follows.

#### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

3. Claims 46 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The claim 46 recites LCST in the form of amino derivative copolymers, one or more monoamino derivative copolymer, ... and triamino derivative copolymer and there is no description for what these amino derivatives are. The specification does not state that by monoamino derivative, we mean or that monoamino derivative is .... Similarly, there is no description for diamino derivative and triamino derivative. It is also noted that claims 1 and 33 are specific with both claims reciting LCST as N-vinylcaprolactam.

Art Unit: 1618

4. Claim 48 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The temperature of the LCST units in claims 48 ranges from 10 °C and 35 °C. Both temperature ranges have starting temperature without an ending temperature. It appears that the range is range from 10 °C to 35 °C and not from 10 °C and 35 °C. The claim is examined as a proper range of from 10 °C to 35 °C.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 26-28, 30, 32-41 and 46-53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Torgerson et al. (US 5,730,966).

Claim 26 is directed to a polymer that comprises water soluble units and LCST unit; the LCST units consist of N-vinylcaprolactam homopolymers or copolymers with the LCST units present in the polymer at a range of from 5% to 70%; the polymer can be a block polymer or a graft polymer; the backbone of the graft polymer is formed from water soluble units bearing LCST grafts; the polymer is optionally cross-linked; the polymer is obtained by reacting the reactive sites of the LCST with the reactive sites of the water soluble polymer units. The water-soluble polymer is further defined by the dependent claims by the process of making the polymer. Claim 30 defines the molar weight of the water-soluble polymer. Claim 32 defines

Art Unit: 1618

the molar weight of the LCST. Claim 34 defines the proportion of the LCST units in the polymer. Claim 35 defines the temperature range of the LCST units when the amount of the LCST units is of 1%. The solubility of the polymer at 20 °C is defined by claim 36. A composition prepared from the polymer of claim 26 has maximum transmittance at wavelengths of from 400 nm to 800 nm in claim 37. Claims 38-41 are composition claims, the composition of claim 38 comprises at least one polymer of claim 26; the polymer is present at an amount of from 0.01% to 20% by weight in claim 39; the compositions of claims 40 and 41 recite the intended use of the composition. The LCST is one or more of monoamino derivative copolymer, diamino derivative copolymer and triamino derivative copolymer. Claim 46 is dependent on claim 33, which is dependent on claim 26, now requires that the LCST, which is specifically N-vinylcaprolactam in claims 26 and 36, be monoamino derivative copolymer, diamino derivative copolymer and triamino derivative copolymer. The amount of the LCST in claim 34 is the range of 30% to 60% by weight (claim 47). The heat induced demixing temperature of a 1% LCST of claim 35 ranges from 10 °C and 35 °C (claim 48). The solubility of the polymer of claim 36 is 20 g/L at 20 °C (claim 49). The water-soluble polymer of claim 26 is made up of acrylic units and the LCST is N-vinylcaprolactam (claim 50). The composition of claim 37 has a maximum light transmittance of at least 85% (51). The polymer of claim 26 is linear (claim 53).

Torgerson discloses thermoplastic elastomeric copolymers for cosmetic and pharmaceutical uses (abstract) and although, future intended use has no patentable weight in a composition claim, it is noted that the composition of both the prior art and the claimed invention have similar/the same utility and thus the limitation of the claimed invention directed to the

Art Unit: 1618

utility of the composition or to the future intended use of the claims is met by Torgerson.

Torgerson discloses water or alcohol soluble or dispersible thermoplastic elastomeric copolymer having a backbone and two or more pendant side chains (column 2, lines 37-42) and the copolymer comprises from about 40% to about 90% by weight of A units, the A units are polymerizable (column 2, lines 43-45; column 5, lines 63-67) and from about 10% to about 60% by weight of B units, the B units are hydrophilic macromonomer units that are copolymerizable with the A units (column 2, lines 46-50; column 6, lines 1-4). In one embodiment, the thermoplastic, elastomeric copolymer having a backbone and two or more polymeric side chain has random repeating units of A and B (column 2, lines 57-67) and the copolymer has a solubility of 20 mg/ml to 100 mg/ml at 25 °C (column 4, lines 42-51). To name a few, the A monomers are selected from the group consisting of acrylic acid, methacrylic acid, isobutyl acrylate, n-butylmethacrylate, vinyl pyrrolidone, vinyl caprolactam, hydroxyethyl acrylate and N,N-dimethylaminoethyl acrylate and mixtures thereof (column 8, lines 16-67). The B units are composed of the hydrophilic units' selected from N-vinylpyrrolidones, vinylimidazoles, vinylcaprolactams, vinylfurans, and N-alkyloxazolines and structural units selected from vinyl, allyl, acryloyl, propenyl and chemical initiator or solvent (column 10, lines 16-65). The copolymers of Torgerson is formulated into hair or topical skin composition in the form of gels, lotions, tonics, sprays shampoos and others listed in column 14, lines 26-35. Torgerson's formulation further comprises carriers (column 14, line 39 to column 15 line 31), pharmaceutical actives (column 17, line 52 to column 19 line 4), conditioners (column 19, lines 6-44), humectants and moisturizers (column 19, lines 46-63), surfactants (column 19, line 65 to column

Art Unit: 1618

21 line 35), thickeners (column 21, lines 39-65), cross-linking agent (Column 22, lines 19-33), emulsifiers (column 22, line 56 to column 23 line 22), emollients (column 23, lines 24-36).

Torgerson discloses that the molecular weight of the A and B units are selected to provide applicability of the formation as it regards acceptable viscosity, processing, aesthetic and formulation compatibility (column 6, lines 6-17) and the formulation contains thickening agent.

Regarding the LCST present at from 5% to 70%, a specific point in the amount of about 40% to about 90% would coincide with a point in the applicants' claimed 5% to 70%.

Regarding optional cross-linking, it is noted that the prior art need not disclose cross-linking agents or cross-linking since cross-linking is optional. However, Torgerson discloses cross-linking as described above. The LCST of the claims is vinylcaprolactam and Torgerson discloses A units that can be vinyl caprolactam and thus a 1% solution/dispersion of vinylcaprolactam of the prior art would have the temperature range recited in the claims and the transmittance, a property that is specific to specific concentration of solute in a solution at some specified optimum wavelength. A 40-90% of A unit of Torgerson encompasses the 30-60 recited in claim 47.

Regarding the process of preparing the polymer, it is noted that product-by-process claims are not limited to the manipulations of the recited steps, only the structure implied by the steps. "[E]ven though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the

Art Unit: 1618

prior product was made by a different process." In re Thorpe, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).

The composition of the prior art and the instant claims are both used as cosmetic. Torgerson does not specifically disclose a polymer comprised of N-vinylparolactam and acrylate polymer. The A units and the B-units are disclosed by Torgerson and it would have been obvious to one of ordinary skill in the art at the time the invention was made to select A and B units from the disclosure of Torgerson that would form the copolymer of Torgerson with the expectation of forming a polymer that is used in cosmetic formulation. The different species of A and B units are listed as being equivalent in Torgerson.

### *Response to Arguments*

In summary applicants argument centers on the fact that Torgerson lists a number of species of A units and B units and that it would be picking and choosing from the list to come up with the claimed invention. This argument is not persuasive as it applies to the 103 rejections. It will be obvious to select from the group of A and B to form a polymer that is used for cosmetic formulation. Both the prior art and the claimed invention are in the same field of cosmetic formulation and the A units and B units are equivalent as listed by Torgerson.

Other Matters:

The claims do not have the proper status identifiers. It is suggested that claims filed in response to this Office Action be properly identified as original, previous presented, currently amended or withdrawn as required by MPEP 714 and further explanation of the amendment



Art Unit: 1618

format can be found at the USPTO website at

<http://www.uspto.gov/web/offices/pac/dapp/opla/preognotice/officeflyer.pdf>

7. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicants' cooperation is requested in correcting any errors of which applicants may become aware in the specification.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Blessing M. Fubara whose telephone number is (571) 272-0594. The examiner can normally be reached on 7 a.m. to 3:30 p.m. (Monday to Friday).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thurman K. Page can be reached on (571) 272-0602. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Blessing Fubara  
Patent Examiner  
Tech. Center 1600

